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AGRICULTURAL MEMORANDUM NO 391

Gramineae Pollen in London 6. Effect of Temperature and Wind Direction

The total pollen count for the season varies from less than 3000 to over 8000. To eliminate this variation, daily pollen counts are converted to daily pollen units by dividing by the seasonal total (in 1000s). Using these figures and eliminating:

a. Wet days - day rain of 2 mm or more.

b. Dull days - day sunshine less than 2 hours.

c. Cold days - day maximum less than 18°C,

examination of the remainder shows that the pollen units in days of June after the "start" of major pollen release, increase on average with temperature at the rate of approximately 4 units per degree C maximum. If the days are then corrected for temperature to a base of 24°C and re-examined in relation to general wind direction we find that the averages are

NW	48
SW	45
SE	37.5
NE	30
Variable	45

The days under the "variable heading" include two abnormally large unit days of 127 and 125, no other day in 10 years exceeds 100. If these values are reduced by 30 each to allow for undiscovered causes the "Variable" average reduces to 40.

If the days are now corrected for wind direction to a base of SW (NW minus 6%, SE plus 22%, NE plus 50%, variable plus 12½%) the following averages are obtained with respect to maximum temperature (at Kew)

Temp	18	19	20	21	22	23	24	25	26	27°C
Units	20	26	26	38	36	44	47	51	46	53

with a correlation of 0.96.

Any comments or suggestions on this paper should be referred to the author.

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Bracknell

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